

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



10/522448



(43) International Publication Date
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number
WO 2004/039470 A2

- (51) International Patent Classification⁷: B01D 1/00 (74) Agent: Keith W Nash & Co; 90-92 Regent Street, Cambridge, CB2 1DP (GB).
- (21) International Application Number: PCT/GB2003/004683 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 29 October 2003 (29.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0225335.9 31 October 2002 (31.10.2002) GB (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
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- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: TEMPERATURE SENSING IN CENTRIFUGAL EVAPORATORS

(57) Abstract: A centrifugal evaporator is described comprising a chamber in which sample containers are carried and rotated by a rotor and are pivotally mounted so as to swing up into a horizontal attitude as the rotor rotates. The evaporator includes an infra red source to direct infra red radiation towards the rotor and the sample containers carried thereon, to heat at least the latter and any sample material therein. A non-contact temperature sensing infra red pyrometer having a sensor with a defined field of view is mounted in the chamber, such that while the rotor as such is substantially out of its field of view, each sample container at least partly occupies the pyrometer field of view for a part of each rotation of the rotor. The positions of the infrared source and the pyrometer components are selected so that the radiation from the infra red source does not impinge on the pyrometer sensor. In particular the infra red source radiation predominantly impinges on the sample containers rather than the rotor. The position of the pyrometer sensor is chosen so that the rotor does not protrude into the pyrometer field of view. The direction of rotation of the rotor is such that any debris thrown from the rotor is directed away from the sensor. Temperature sensing means measures the temperature of the chamber, the pyrometer sensor body and the body of the chamber temperature sensor. Electrical signal processing means receives signals from the IR pyrometer sensor and the temperature sensing means to adjust the temperature values from the IR pyrometer sensor to take account of the chamber temperature, and sensor body temperature.



WO 2004/039470 A2